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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,723	05/25/2004	Hendra Sudin	22171-00016-US1	3722
30678	7590	09/09/2005	EXAMINER	
CONNOLLY BOVE LODGE & HUTZ LLP SUITE 800 1990 M STREET NW WASHINGTON, DC 20036-3425			CHAN, EMILY Y	
			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/709,723

Applicant(s)

HENDRA SUDIN

Examiner

Emily Y Chan

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,12,25,38,41,44,47 and 48 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,12,25,38,47 and 48 is/are rejected.
7) ☒ Claim(s) 2,41 and 44 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 25 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Since a new reference is found during further search of the claimed invention, the finality of the office action dated on 6/22/05 is withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Asar US patent 5473254.

Asar ('254) discloses a test probe for electrically testing an integrated circuit device as claimed (see Fig. 4) comprising:

an insulative body (insulating sleeve 82) including at least one opening;

at least one supporter (86) positioned inside the at least one opening of the insulative body, wherein the supporter (86) comprises a helical spring with a spiral coil (88) substantially in a same plane;

a probe (72) positioned substantially at a center of the support (86), wherein the probe (72) is arranged to electrically connected to a pad of the integrated circuit device during testing; and

a conductive wire (94, 96) positioned in the insulative body (insulating sleeve 82) and electrically connected to the supporter (86).

Therefore, Asar ('254) anticipates the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al US Patent No. 6,781,392 in view of Asar ('254).

Cheng et al ('392) expressly disclose a modularized probe card (see Fig. 1) as claimed, comprising:

a circuit board (60) having a plurality of test-connecting sites; and
a plurality of connective paths for connecting the test-connecting sites to bottom surface of the circuit board (60); and

a probe head (20) having a plurality of probe devices (23); and

an interface board (10) comprising:

at least one first signal-connecting site positioned on the upper surface of the interface board (10) for electrically connecting the test-connecting site of the circuit board (60); and

at least one second signal-connecting site positioned on the bottom surface of the interface board (10) for electrically connecting the conductive wire of the probe head (20).

Cheng et al ('392) do not disclose that their probe device (23) comprises (1) an insulative body, (2) at least one supporter, (3) a probe positioned substantially at a center of the support and a conductive wire.

Asar ('254) discloses a test probe for electrically testing an integrated circuit device as claimed (see Fig. 4) comprising: an insulative body (82) including at least one opening, at least one supporter (86) positioned inside the at least one opening of the insulative body, wherein the supporter (86) comprises a helical spring with a spiral coil (88) substantially in a same plane a probe positioned substantially at a center of the support, a probe (72) positioned substantially at a center of the support (86) and a conductive wire (94, 96) positioned in the insulative body (insulating sleeve 82) and electrically connected to the supporter (86).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate the helical spring with a spiral coil of the test probe as taught by Asar ('254) into Cheng et al ('392) 's system for the expected benefit of providing a probe to exert the predetermined force on a corresponding contact with which the probe is engaged as disclosed by Asar ('254) (see Col. 1, lines 45-46).

4. Claims 38, and 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asar ('254) in view Cheng et al ('392) as applied to claims 1, 12 and 25 above, and further in view of Chee US patent No. 6,084,420.

Asar ('254) in view Cheng et al ('392) do not specify that the probe and support each comprising a material selected from the group of consisting of copper, nickel, cobalt and other related alloys.

Chee ('420) discloses a probe assembly for testing (see Figs 1-3) and exclusively teaches that his probe (30) and support (32,34, 36) each comprises tungsten and copper and other material)(see Col. 3, lines 56-65).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to incorporate the probe and support made of metal alloys as taught by Chee ('420) into Asar ('254)'s and Cheng et al ('392)'s system for the expected benefit of allowing the probe tips to move independently to compensate for wafer movement or variations in test pads positions as disclosed by Chee ('420) (see Col. 2, lines 5-8).

Allowable Subject Matter

5. Claims 2, 41 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

Claims 2, 41 and 44 are allowed because the prior art of record does not teach or suggest a probe device for electrically testing an integrated circuit further comprising two supporters positioned substantially in parallel with each other inside the at least one opening of the insulative body as shown in Fig. 1.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emily Y. Chan whose telephone number is 571-272-1956. The examiner can normally be reached on 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 571-272-2034. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EC
9/2/05


VINH NGUYEN
PRIMARY EXAMINER
A.U. 2829
09/02/05